

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A bipolar semiconductor device comprising:
  - a drain electrode;
  - a drain region having a first conductive type semiconductor and disposed on the drain electrode;
  - a drift region having a second conductive type semiconductor different from the first conductive type semiconductor of the drain region and disposed on the drain region;
  - a channel region having the second conductive type semiconductor and disposed on the drift region;
  - a gate region surrounding at least a part of the channel region via an insulation film, the gate region having the first conductive type semiconductor;
  - a source region having the second conductive type semiconductor provided on the channel region, the source region is located substantially at a center of the channel region, and the source region is isolated from the insulation film; and
  - a source electrode connected to the source region,

wherein a depletion layer is formed over most of the entire channel region when a predetermined voltage is applied to the gate region.

2-3. (Canceled)

4. (Previously Presented) The semiconductor device according to claim 1, further comprising a semiconductor region having the first conductive type semiconductor and provided between the channel region and the source electrode.

5-19. (Canceled)

20. (Previously Presented) A bipolar semiconductor device comprising:

a drain electrode;

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a drain region having a first conductive type and disposed on the drain electrode;

a drift region having a second conductive type different from the first conductive type and disposed on the drain region;

a channel region having the second conductive type and disposed on the drift region;

a gate region surrounding at least a part of the channel region via an insulation film, the gate region having the first conductive type;

a source region having the second conductive type provided on the channel region, the source region is located substantially at a center of the channel region, and the source region is isolated from the insulation film; and

a source electrode connected to the source region,

wherein at least a part of the source electrode forms a Schottky junction with the channel region.

21. (Previously Presented) A bipolar semiconductor device comprising:

a drain electrode;

a drain region having a first conductive type and disposed on the drain electrode;

a drift region having a second conductive type different from the first conductive type and disposed on the drain region;

a channel region having the second conductive type and disposed on the drift region;

a gate region surrounding at least a part of the channel region via an insulation film, the gate region having the first conductive type;

a source region having the second conductive type provided on the channel region, the source region is located substantially at a center of the channel region, and the source region is isolated from the insulation film;

a source electrode connected to the source region; and

a semiconductor layer having the second conductive type located between the source region and the source electrode, the semiconductor layer including an end face extended to a position covering at least a portion of the gate region.

22-30. (Canceled)

31. (Previously Presented) A semiconductor device comprising:

a first cathode region having a first conductive type;

a second cathode region having the first conductive type and disposed on the first cathode region;

a first anode region having a second conductive type and provided on the second cathode region;

a trench structure provided so as to surround at least the first anode region via an insulation film; and

a second anode region having the second conductive type and provided on the first anode region, where an impurity concentration in the first anode region is low to effect pinch off of the first anode region when a reverse bias is applied to the trench structure.

32-34. (Canceled)